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ABSTRACT

This handbook provides high school students with the information needed to form and maintain high school chapters of the American Indian Science and Engineering Society (AISES). AISES is a private non-profit organization founded in 1977 to increase the number of American Indian scientists and engineers in the nation and to develop technologically informed leaders within the Indian community. AISES pre-college student programs provide learning experiences that promote academic and cultural enrichment, and provide students with opportunities for interaction with American Indian role models in science, engineering, and mathematics related professions. Programs also increase career awareness and heighten the sense of American Indian identity. The advantages and opportunities available through AISES high school student chapters are listed. The steps in forming a chapter, and ways to recruit students and find an advisor are outlined. Information is also provided on AISES science clubs, fund raising activities, and the AISES code of ethics. (SV)

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High School Chapter Handbook

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American Indian Science and Engineering Society
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1990 Edition

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VISION

To take the essence of
Our inner most selves.
Our Past.
Our Dreams.

Bring it to surface.

To blend with
Our physical being.
Our Knowledge.
Our Abilities.

Giving us Power.

To determine
Our own paths
Our lives.
Our future.

We have a VISION.

*

Michael D. Avritt
San Felipe Pueblo

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HIGH SCHOOL STUDENT CHAPTER MANUAL

Search for the truth.
Indian values teach the holistic approach
to the use of technology for mankind's good.

*

Alfred H. Qoyawayma, Engineer
Hopi

INTRODUCTION

This manual is a reference guide for the American Indian Science and Engineering Society (AISES) High School Student Chapters. Its purpose is to provide the information necessary to form and maintain viable AISES High School Chapters. Each chapter is unique and will be an entity unto itself yet will maintain the common goals and objectives of the AISES organization.

THE AMERICAN INDIAN SCIENCE AND ENGINEERING SOCIETY

The American Indian Science and Engineering Society (AISES) is a private, non-profit organization founded in 1977 which seeks to significantly increase the number of American Indian scientists and engineers in the nation and to develop technologically informed leaders within the Indian community.

AISES maintains a comprehensive communication network among American Indian tribes and leaders, schools, colleges, agencies, organizations, and educational professionals: both American Indian and non American Indian.

AISES PRE-COLLEGE STUDENT PROGRAMS

Pre-college student programming is designed to improve the quality of education for American Indian students through effective programs. These programs will provide learning experiences which promote academic and cultural enrichment. In addition, programs will provide opportunities for interaction with American Indian role models in science, engineering and mathematics related professions. Further, programs will increase career awareness and enable each student to develop a stronger identity as an American Indian learner. An integral part of the programs will be parent and community involvement and community service. Research and evaluation of program effectiveness will allow AISES to document and sustain the aforementioned pre-college initiatives.

AISES STUDENT CHAPTERS

THE AISES HIGH SCHOOL STUDENT CHAPTER -- WHAT'S IN IT FOR YOU?

* You will hold a membership card for a National organization.

* You will be part of a network of American Indian scientists and engineers -- a network of opportunities.

* You will have the opportunity to participate in a regional National American Indian Science Fair.

* You will receive important career information which might lead to internships or summer jobs.

* You will receive scholarship and college application information.

* You will have the opportunity to develop your leadership qualities.

* You will receive the AISES "Education Newsletter" which will keep you informed of additional educational opportunities.

AISES OBJECTIVES:

* Stimulate the interest of American Indian students in mathematics, sciences and engineering both academically and professionally;

* Help Indian students assess their potential skills and abilities in mathematics and the sciences;

* Increase the students' knowledge and performance skills in mathematics and sciences;

* Enhance the students' confidence in their abilities and opportunities in mathematics and the sciences, both in school and in the job market;

* Acquaint students with applications of mathematics and sciences in the "real" world;

* Prepare students for cultural challenges away from their traditional environment;

* Encourage parents of the participating students to support the academic pursuits of their children;

* Influence the Indian community toward a higher academic expectations for their young people.

AISES OPPORTUNITIES:

* A four-year Comprehensive Enrichment Program funded by the MacArthur Foundation.

* Math and Science Camps held on various university campuses.

* Science Fairs: the National Native American Science Fair and the International Science and Engineering Fair.

* AISES Outstanding High School Senior Student Scholarship.

* AISES "Education Newsletter."

* AISES Resource Library.

HIGH SCHOOL CHAPTER FORMATION

If you are interested in forming an AISES High School Chapter, you must have:

1. Official permission from your school's administration.
2. A group of interested students.
3. A person (preferably a science or math teacher) willing to be Chapter Advisor.

How are interested students recruited?

1. Publicize that an informal meeting of people interested in AISES will be held at a certain time and place. At the meeting, explain AISES to the students and make a list of names of people who would like to be involved. Contact AISES PreCollege Student Programs for a video about AISES.
2. Speak about AISES and the formation of a Chapter over the public address system at your school. Include information about what a person should do if he or she is interested.
3. Ask science or math teachers to speak to their classes about the possible formation of a Chapter and get names of interested students.
4. Generate a public relations and media campaign whenever feasible.

How does a group of students find an advisor?

1. Keep in mind that you want an advisor who is very enthusiastic about providing advice and adult sponsorship of your group. The group should meet informally and come up with a list of names of people that might be willing to serve as the advisor. A spokesperson for the group should approach these individuals with the group's request. The information below might be helpful to the spokesperson:
    a. Provide the prospective advisor with a brief description of an AISES High School Chapter and its Science Club.
    b. Explain that once the Chapter is formed, there will be a specific set of guidelines to follow that come from AISES Headquarters.

c. Explain that the AISES High School Chapter is intended to be FOR STUDENTS AND BY STUDENTS: an advisor is needed as an adult sponsor of the Chapter.

2. Another way to find an advisor or sponsor is to ask the school's principal for some advice on the matter.

To summarize, here is what to do to form an AISES High School Chapter:

- Get permission from the school's administration.
- Gather the interested students together.
- Find an advisor.
- Send in the Request for Application form at the end of this handbook.
- When your application arrives, complete and send it with the $2.00 per student yearly membership fee to the Director of PreCollege Student Programs.

ONCE THE CHAPTER IS OFFICIALLY FORMED:

When your AISES High School Chapter is formed, there are a few things that the members should do right away:

1. Hold a meeting at which the code for the governing of High School Chapters will be presented (read if necessary) to the members.
2. Elect officers according to the guidelines in the code.
3. Read and discuss the goals and activities of AISES High School Chapters that are listed in this handbook.

Be innovative. Use your student chapter to impact other American Indian students in your school and community:

* "Be a Science of Math Teacher for a Day!" An AISES student could swap places with a science/math teacher and give the lesson of the day.

* Get teachers, parents or students to role play a famous scientist talking about his or her major work. These can be small presentations "brought by AISES" to a particular class.

* Members of the chapter could guest lecture at the Jr. High or Elementary level classes . . . perhaps conduct an experiment or give a brief presentation on a topic that would interest young students and motivate them to want to learn about science.

* Chapter members can assist Junior High or Elementary Schools with organizing their science fairs.

The rest of this handbook covers topics of concern to AISES High School Student Chapters.

Remember, your High School Chapter can be all you want it to be. Aim high and your enthusiasm will spread!

AISES SCIENCE CLUBS

A very important aspect of your AISES High School Chapter is its support of applied science and mathematics. One way in which this support can be demonstrated and strengthened is through the active promotion of science fairs. As a High School Chapter, your school will be provided with the materials necessary for starting a **Science Club**, and implementing an annual science fair. Your school will receive:

- A comprehensive guide, designed by AISES, detailing how to plan and implement a science fair.
- A slide/tape show, "Science Projects, Science Fairs," designed for American Indian students.
- Certificates for students participating in your science fair.
- A set of medals for the top three science fair projects.

FUND RAISING

Promoting interest in science, engineering and technology can be likened to marketing a product. Sometimes a group must spend some money in order to reap the rewards or achieve the goals it set out to reach. Some of the things an AISES High School Student Chapter can do with money raised are listed below. These are only suggestions.

1. Invite speakers (scientists, engineers, college students professors from nearby colleges) to come to the school. This can mean that you will need expenses for refreshments, custodial services, maybe even renting a good public address system.

2. Your AISES Chapter might want to purchase a computer to be used by its members.

3. You may want to improve the current collection of science and engineering reference materials in the school library or order subscriptions to some science periodicals.

4. The members might wish to take a science field trip which the school approves of but finds too expensive.

5. The Chapter might want to rent a film or videotape for its members to view.

6. Wouldn't it be nice to have enough money to send members to the Annual AISES National Conference.

SUGGESTIONS FOR FUND RAISING ACTIVITIES

It is in the planning of fund raising activities that it is best to work closely with your advisor. Be sure to work within the school's guidelines for fund raising activities.

Some standard activities: Bake Sale, Car Wash, Dance

Not so standard:

1. If your school is having a social event, find out if your AISES chapter can be in charge of, and receive the profits from the sale of refreshments.

2. If your school has a newspaper, ask to be in charge of a column to which students must pay a small fee to have something listed in it: Song Dedications, Secret Messages, A Calendar of Events.

3. Have AISES chapter members become tutors to students having difficulty with math or science courses. The AISES member must donate his or her time but the student being tutored is charged a small hourly fee.

4. Sponsor a "Flower Day." AISES chapter members take orders to deliver flowers anonymously to people in the school. Students who want the service pay in advance and indicate to whom they would like the flower sent when the special day arrives. Carnations work well for this. Check for the best deal.

5. Sell AISES T-Shirts or shirts with catchy sayings about science and technology.

CODE OF ETHICS

AISES is serious about its commitment to Indian education and its concern for the academic, spiritual, and physical well-being of students.

Our concern for physical well-being is reflected by the following policy:

1. The possession and/or use of alcohol or drugs is not permitted.

2. Remember that you represent your family, school and tribal community. Conduct yourself accordingly.

The AISES Board of Directors has established a non-alcoholic policy which prevails at all AISES functions. The possession of alcohol or drugs is prohibited on the premises of the function site which includes lounges, rooms and adjacent parking lots. Disciplinary actions will be taken against offenders, and any damage costs will be borne by the responsible High School Student Chapter.

AISES
AMERICAN INDIAN SCIENCE AND ENGINEERING SOCIETY

REQUEST FOR HIGH SCHOOL STUDENT CHAPTER
MEMBERSHIP APPLICATION

1. Name of School: _____
2. Mailing Address: _____
   City, State, Zip
3. School Phone: (___)_____
4. Contact Person: _____
5. Approximate Number of Students in Chapter: _____

You will receive an AISES High School Chapter Application and Student Membership Applications to complete.

Return all Completed forms to:

PreCollege Student Programs
American Indian Science and Engineering Society
1085 14th Street
Suite 1506
Boulder, CO 80302-7309